

Figure 1A. Pattern Shaping Gain Adjustment in RF Section

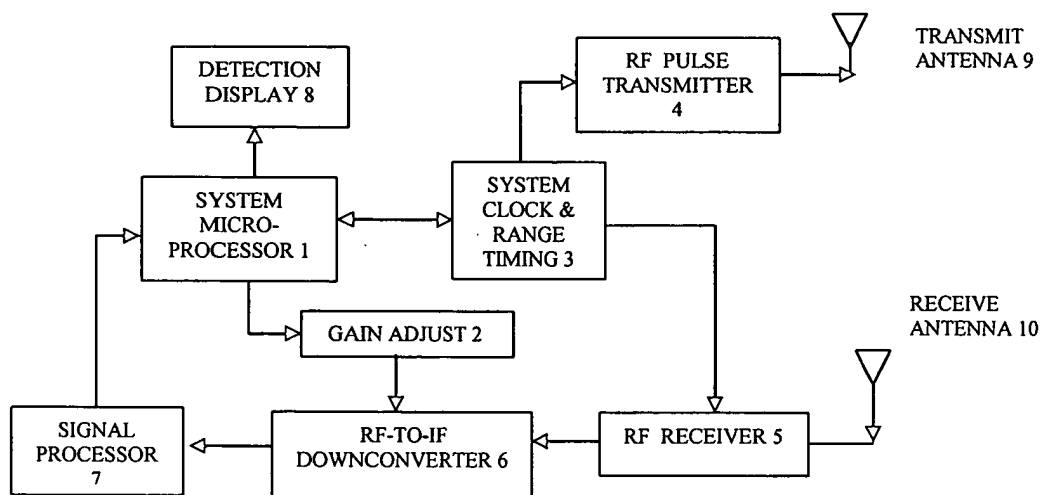


Figure 1B. Pattern Shaping Gain Adjustment in RF-to-IF Downconversion Section

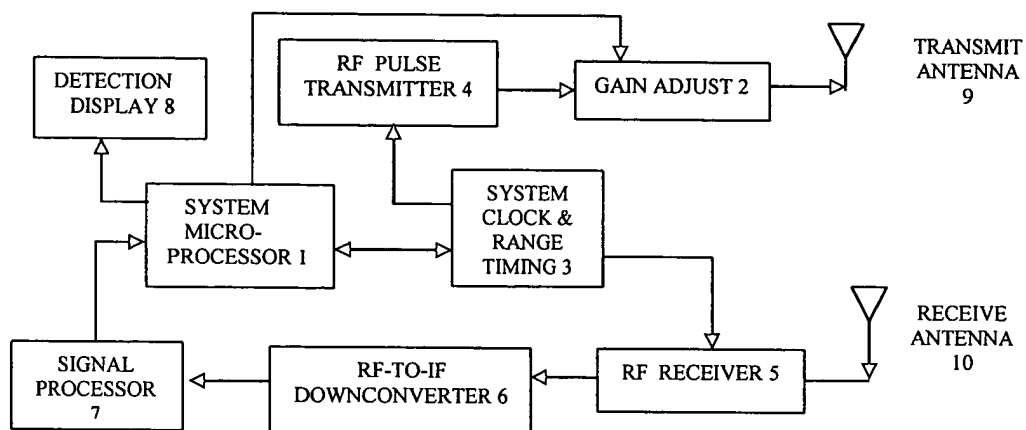


Figure 1C. Pattern Shaping Gain Adjustment Made in Transmitter Section

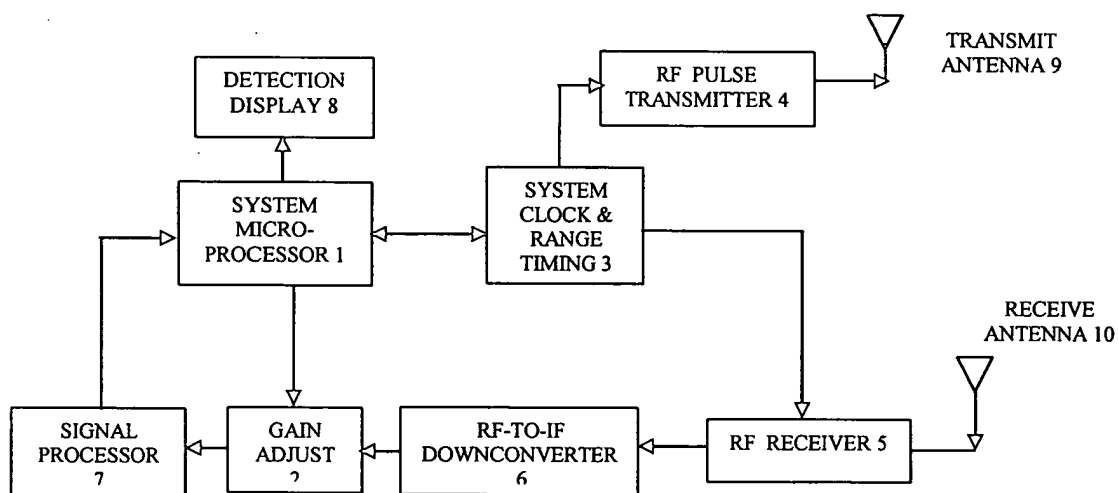
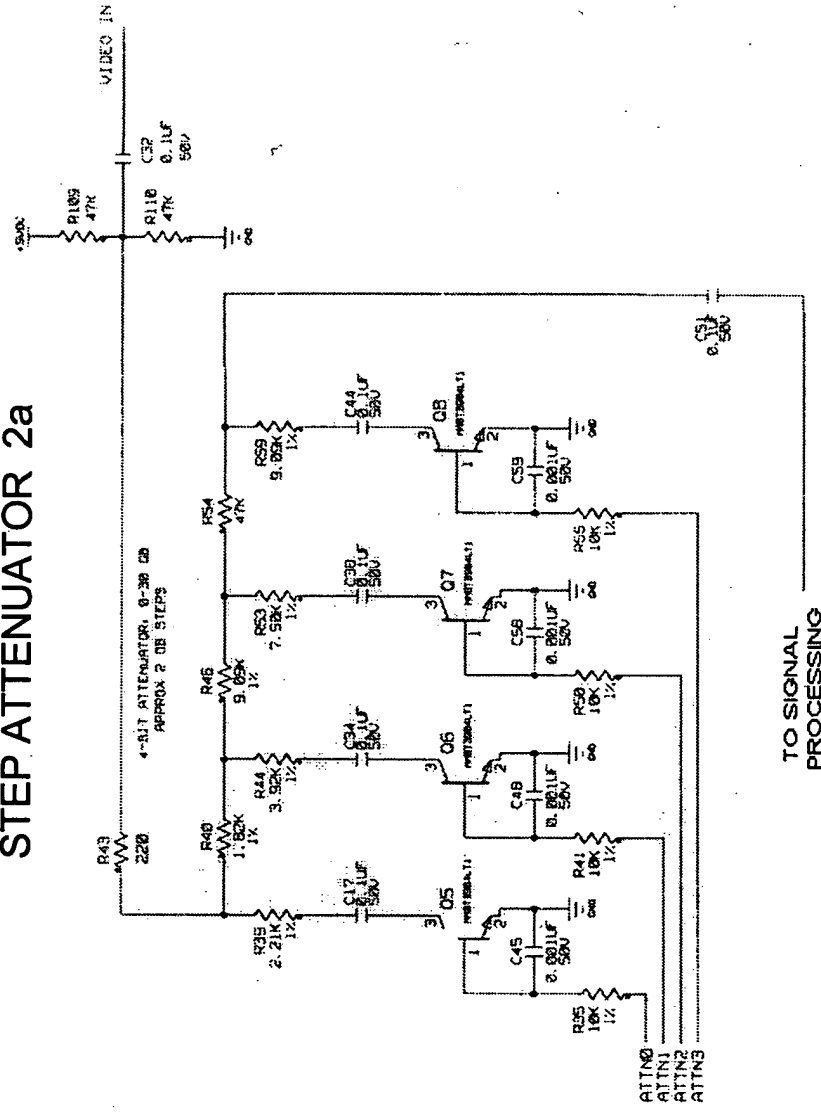


Figure 2. Pattern Shaping Gain Adjustment in Signal Processor Section

## STEP ATTENUATOR 2a



## MICROCONTROLLER 1

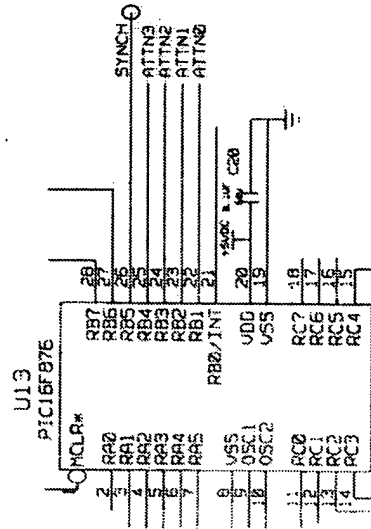


Figure 3. Schematic Diagram of a Preferred Method for Pattern Shaping

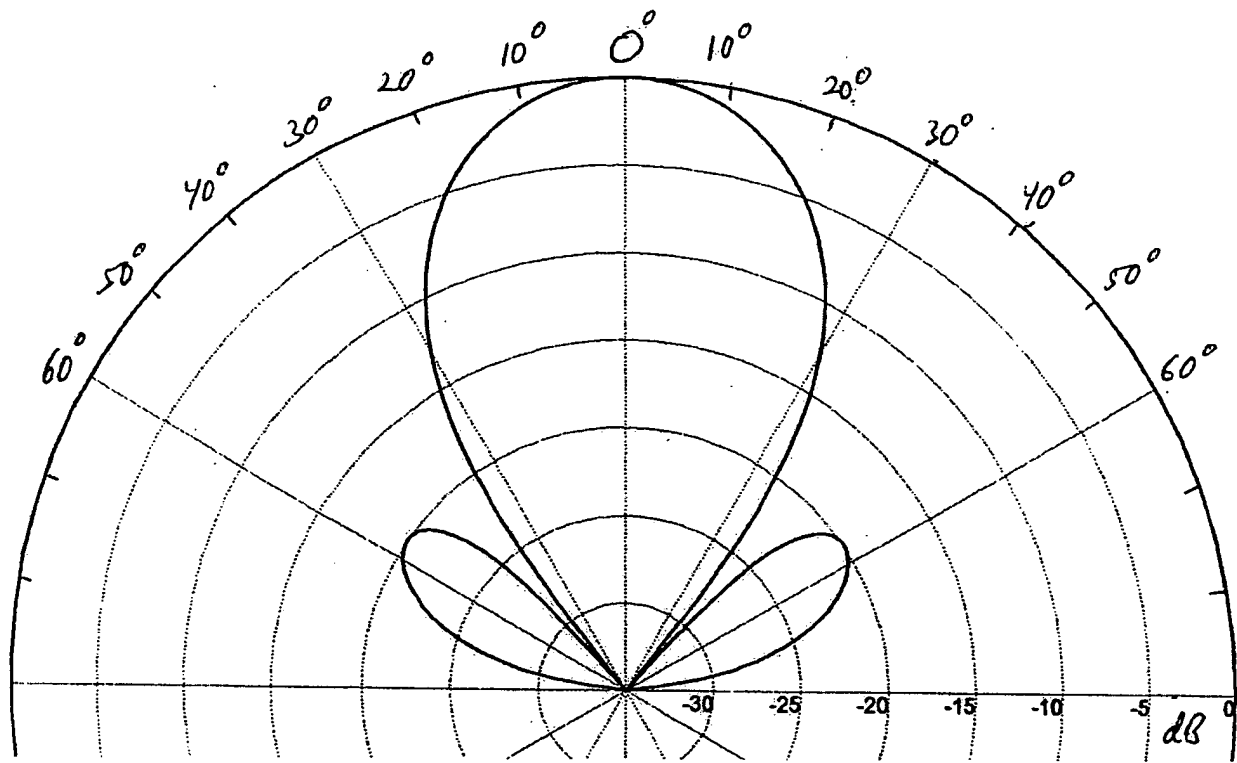
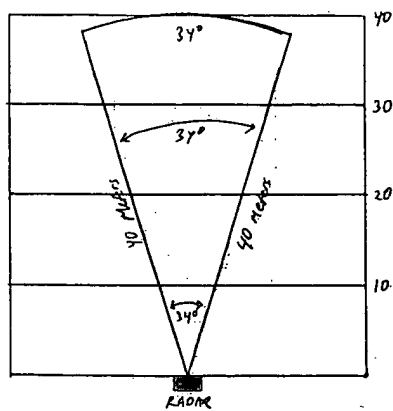
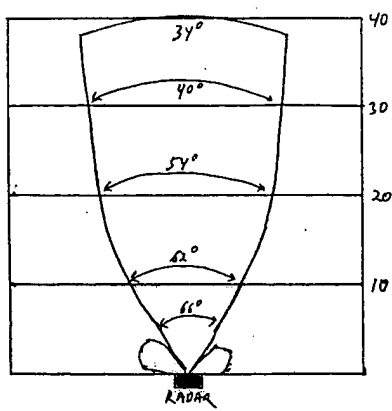


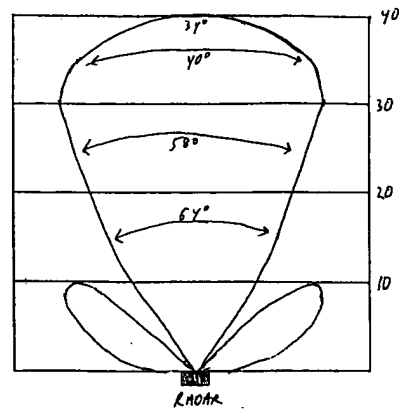
Figure 4. Typical Antenna Power Pattern Polar Plot



$R^4$  Correction  
Fig. 5A

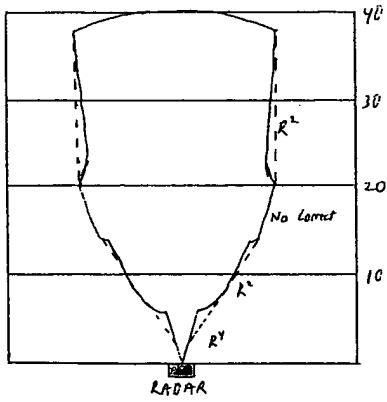


$R^2$  Correction  
Fig. 5B

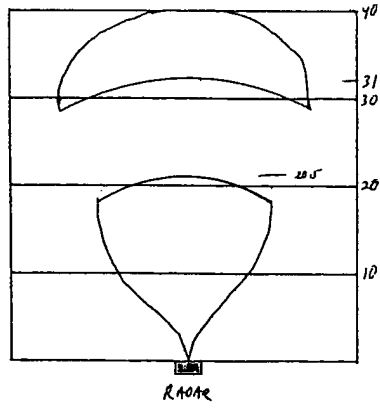


No Correction  
Fig. 5C

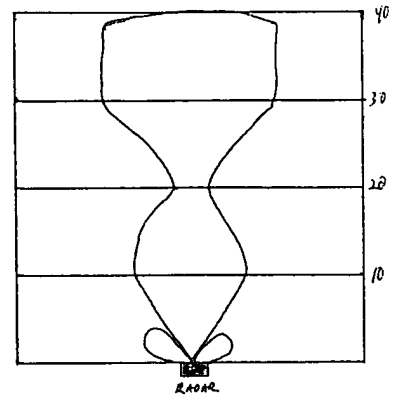
Figure 5. Typical Radar Detection Coverage Areas Corresponding To Fixed Range-Dependent Gain Correction



Pattern #1  
Fig. 6A



Pattern #2  
Fig. 6B



Pattern #3  
Fig. 6C

Figure 6. Using Gain Adjustment to Shape Three Distinct Coverage Areas